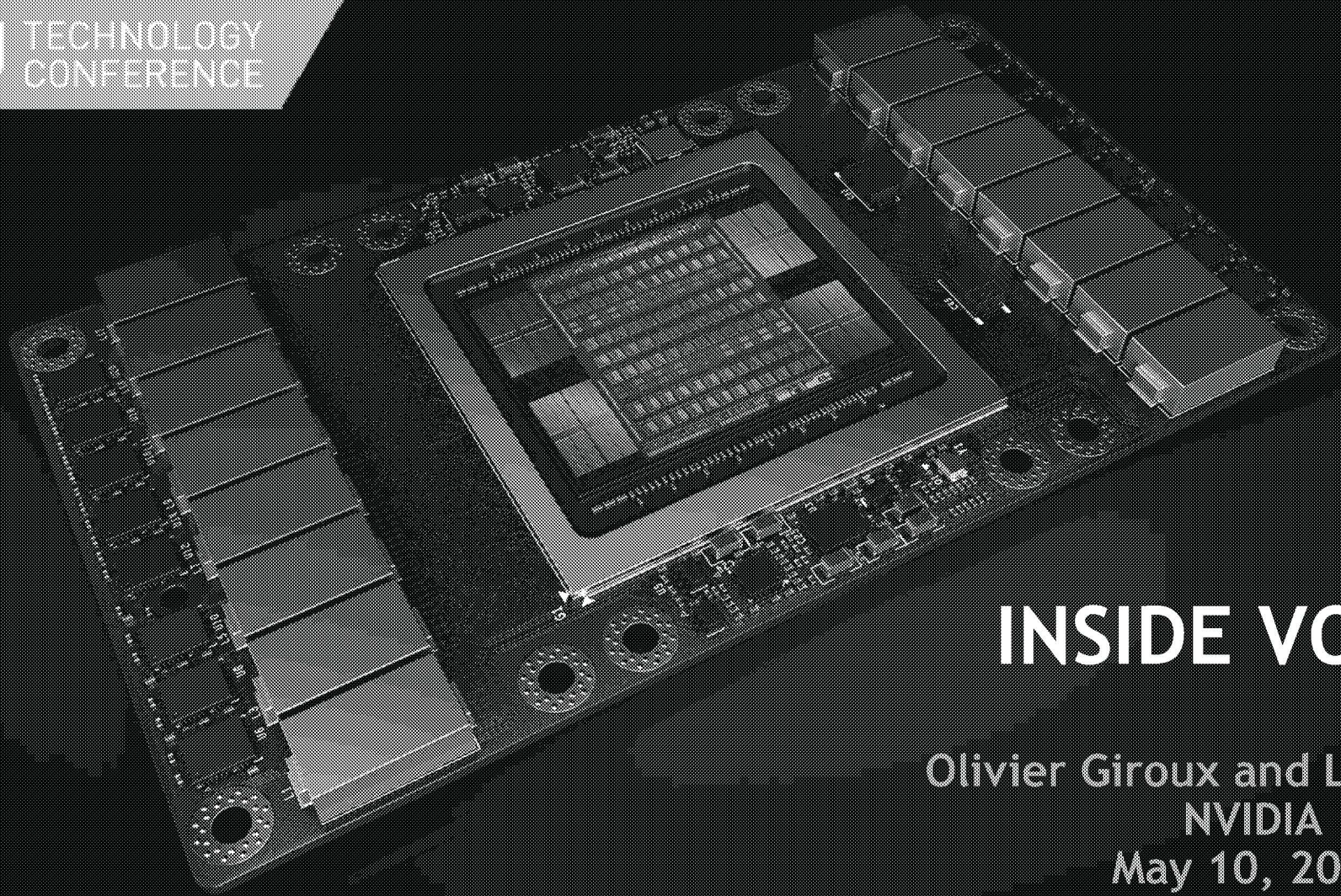# Exhibit 3
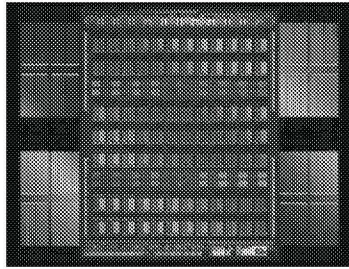
INSIDE VOLTA

Olivier Giroux and Luke Durant
NVIDIA
May 10, 2017

INTRODUCING TESLA V100

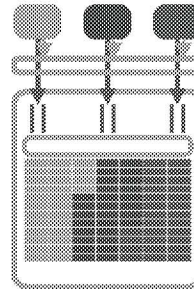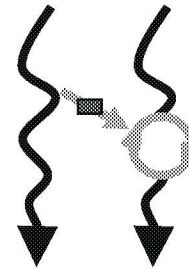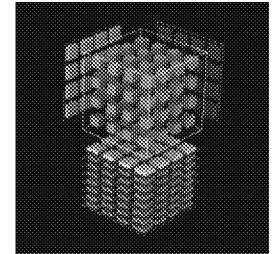| Volta Architecture	Improved NVLink & HBM2	Volta MPS	Improved SIMT Model	Tensor Core
Most Productive GPU	Efficient Bandwidth	Inference Utilization	New Algorithms	120 Programmable TFLOPS Deep Learning

The Fastest and Most Productive GPU for Deep Learning and HPC

4   NVIDIA.

TESLA V100
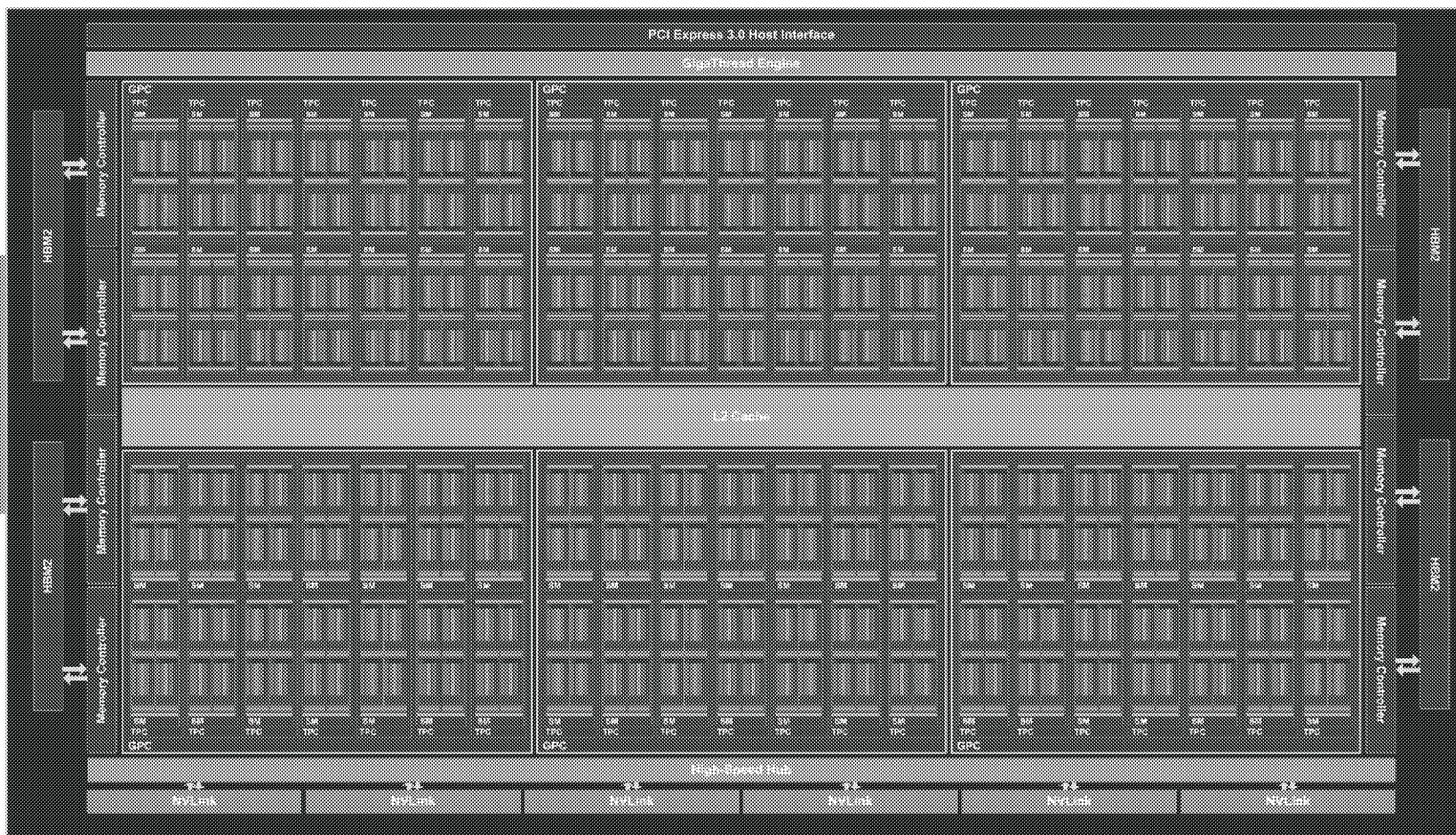
21B transistors
815 mm^2

80 SM
5120 CUDA Cores
640 Tensor Cores

16 GB HBM2
900 GB/s HBM2
300 GB/s NVLink

*full GV100 chip contains 84 SMs

GPU PERFORMANCE COMPARISON

	P100	V100	Ratio
Training acceleration	10 TOPS	120 TOPS	12x
Inference acceleration	21 TFLOPS	120 TOPS	6x
FP64/FP32	5/10 TFLOPS	7.5/15 TFLOPS	1.5x
HBM2 Bandwidth	720 GB/s	900 GB/s	1.2x
NVLink Bandwidth	160 GB/s	300 GB/s	1.9x
L2 Cache	4 MB	6 MB	1.5x
L1 Caches	1.3 MB	10 MB	7.7x

6   NVIDIA.

NEW HBM2 MEMORY ARCHITECTURE

HBM2 stack

1.5x Delivered Bandwidth

STREAM: Triad- Delivered GB/s

P100
76% DRAM Utilization

V100
95% DRAM Utilization

V100 measured on pre-production hardware.

7   nVIDIA.

VOLTA NVLINK

300GB/sec

50% more links

28% faster signaling